

**What is claimed is:**

1           1.    A method of modifying a digital video stream  
2 according to the at least one insertion, the method  
3 comprising using a computer to perform the steps of:

4           segmenting the digital video stream into at least  
5           one video partition;

6           acquiring a plurality of first frames by analyzing  
7           at least one video partition;

8           determining a first modification area in the first  
9           frame for at least one insertion;

10          modifying the first modification area according to  
11          the at least one insertion to acquire a first  
12          processed area; and

13          replacing the first modification area of the first  
14          frame with the first processed area and thereby  
15          generating a final edited digital video stream.

1           2.    The method as claimed in claim 1 further  
2 comprising, in the step of modifying the first  
3 modification area, if the first modification area of the  
4 first frame refers to at least one second frame, the  
5 steps of:

6           defining at least one second reference area in the  
7           second frame according to the first  
8           modification area;

9           modifying the second reference area according to the  
10          first modification area to acquire a second  
11          processed area; and

12 replacing the second reference area of the second  
13 frame with the second processed area.

1 3. The method as claimed in claim 1 further  
2 comprising, in the step of modifying the first  
3 modification area, if the first modification area refers  
4 to the first frame, the steps of:

5 defining at least one first reference area of the  
6 first frame according to the first modification  
7 area;

8 modifying the first reference area according to the  
9 first modification area to acquire a third  
10 processed area; and

11 replacing the first reference area of the first  
12 frame with the third processed area.

1 4. The method as claimed in claim 2 wherein, in  
2 the step of modifying the second reference area, the  
3 first modification area and the second reference area are  
4 decompressed for modification.

1 5. The method as claimed in claim 2 further  
2 comprising, after modification, compressing the first  
3 modification area using a video compression algorithm.

1 6. A system of modifying a digital video stream  
2 according to the at least one insertion, comprising:

3 a video segmentation unit segmenting the digital  
4 video stream into at least one video partition;  
5 a video analysis unit acquiring at least one first  
6 frame by analyzing at least one video  
7 partition, and determining a first modification

8                   area corresponding to the at least one  
9                   insertion;  
10          a video processing unit modifying the first  
11               modification area according to the at least one  
12               insertion to acquire a first processed area;  
13               and  
14          a video replacement unit replacing the first  
15               modification area of the first frame with the  
16               first processed area, thereby generating a  
17               final edited digital video stream.

1           7.    The system as claimed in claim 6 wherein the  
2    video processing unit, if the first modification area of  
3    the first frame refers to at least one second frame,  
4    defines at least one second reference area of the second  
5    frame according to the first modification area, modifies  
6    the second reference area according to the first  
7    modification area to acquire a second processed area, and  
8    replaces the second reference area of the second frame  
9    with the second processed area.

1           8.    The system as claimed in claim 6 wherein the  
2    video processing unit, if the first modification area of  
3    the first frame refers to the first frame, defines at  
4    least one first reference area of the first frame  
5    according to the first modification area, modifies the  
6    first reference area to acquire a third processed area,  
7    and replaces the first reference area of the first frame  
8    with the third processed area.

1           9. The system as claimed in claim 7 wherein the  
2 first modification area and the second reference area are  
3 decompressed for modifying.

1           10. The system as claimed in claim 7 wherein in the  
2 video processing unit, a video compression algorithm is  
3 used to compress the first modification area after  
4 processing the first modification area.

1           11. A storage medium for storing a computer program  
2 providing a method of modifying a digital video stream  
3 according to the at least one insertion, comprising:  
4           segmenting the digital video stream into at least  
5           one video partition;  
6           acquiring a plurality of first frames by analyzing  
7           at least one video partition;  
8           determining a first modification area in the first  
9           frame for the at least one insertion;  
10          modifying the first modification area according to  
11          the at least one insertion to acquire a first  
12          processed area; and  
13          replacing the first modification area of the first  
14          frame with the first processed area and thereby  
15          generating a final edited digital video stream.

1           12. The storage medium as claimed in claim 11 ,  
2 further comprising, in the step of modifying the first  
3 modification area, if the first modification area of the  
4 first frame refers to at least one second frame, the  
5 steps of:

6 defining at least one second reference area in the  
7 second frame according to the first  
8 modification area;  
9 modifying the second reference area according to the  
10 first modification area to acquire a second  
11 processed area; and  
12 replacing the second reference area of the second  
13 frame with the second processed area.

1 13. The storage medium as claimed in claim 11  
2 further comprising, in the step of modifying the first  
3 modification area, if the first modification area refers  
4 to the first frame, the steps of:

5 defining at least one first reference area of the  
6 first frame according to the first modification  
7 area;  
8 modifying the first reference area according to the  
9 first modification area to acquire a third  
10 processed area; and  
11 replacing the first reference area of the first  
12 frame with the third processed area.

1 14. The storage medium as claimed in claim 12  
2 wherein, in the step of modifying the second reference  
3 area, the first modification area and the second  
4 reference area are decompressed for modification.

1 15. The storage medium as claimed in claim 12  
2 further comprising, after modification, compressing the  
3 first modification area using a video compression  
4 algorithm.